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Fall 2018

# ID 203-001: Innovation: Past, Present and Future of Design

Jose Alcala

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## ID 203 - Innovation: Past, Present and Future of Design

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NJIT Fall 2018  
Kupfrian Hall – Room 206

Instructor: Jose Alcala  
Wednesdays 11:30 AM - 2:20 PM

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### Course Description

This intensive survey course marks pivotal design paradigm shifts from ancient cultures, through the industrial revolution, the present day and projected into the future. This course will focus on the human activity called "Design" through a polyfocal lens. Case studies of selected cultures, designers and artifacts will expose the student to the forces, history, methods, styles and meanings that shape the human ecology and the trajectory of human evolution.

We will attempt to understand the fruits of Industrial Design contextually, that is, within the complexity of critical zeitgeists, memes, paradigms, economies, technologies and geographies. As a means to dig deep below the surface we will need to draw from various disciplines including: anthropology, ethnology, zoology, physics, marketing / advertising, sociology, economics, art history and, of course, design. This will be done through various mediums throughout the semester including: projects, film, fine art, TV, WWW, literature, heated in-class discussions and lectures.

### Course Objectives

- Develop depth and understanding of the human ecology and its artifacts
- Broaden the definition of Industrial Design
- Hone research, critical thinking and presentation skills
- Gather and synthesize information from a variety of sources and disciplines
- Produce a presentation and printed document that demonstrate these acquired skills

### Your Responsibility

- **Participate in class** discussions. Contribute individual experiences and opinions when relevant to the topic so that others can benefit and learn. This is a big part of the class!
- **Ask questions**...there is no dumb/bad question.
- **Respect** others opinions, and their social, cultural, political, moral and religious point of view.
- **Cell phones should be turned off** at the beginning of class unless you are emergency personnel on-call. Activation or use of a cell phone will be penalized.
- Take **individual responsibility** for completing and submitting assignments on time.
- **Participate in all team-related** activities, homework assignments, presentations and exercises.
- **Check e-mail and Moodle / Kepler3** frequently. Everyone must have an active e-mail address. You can receive a free e-mail address and access to the Internet from NJIT.
- A **CD/DVD of ALL work** for this class shall be submitted to professor at end of semester as well as **ALL work shall be uploaded to Kepler3**. Failure to do so shall result in a failing grade until this requirement has been satisfied.

- **Regular attendance** is expected. When possible, please give advance notice of your absence. NJIT requires attendance for **ALL** students. After 3 recorded absences, your grade will be lowered by one-half ( $\frac{1}{2}$ ) grade point for each additional absence, if you are not carrying a medical, school or religious related excuse. No excuses will be accepted without a written note from the Dean or a doctor. Students with particular needs and foreseen absences should present them to their instructor within the first week of class.  
Attendance for student athletes: No student athlete may miss any regularly scheduled classes for any practice activities. This means students can neither miss nor leave class early (or arrive late) to attend a practice. While student athletes may miss class when participating in intercollegiate competition, it is the responsibility of the student athlete to proactively inform the instructor well in advance to make appropriate arrangements to complete or make up any assignments or exams in a timely fashion.
- **Lateness** is inconsiderate and disruptive - and will not be tolerated. Five lates will lower your grade by one grade point.
- Academic **integrity and honesty** are of paramount importance in this class. The NJIT "University Code on Academic Integrity" will be upheld and any violation can, and will be, brought to the immediate attention of the Dean of Students by either a faculty member or student.

### Grading

Final grade will be based on the following criteria: Level of effort and commitment, quality of work, reading assignment comprehension, class participation, project progress, timely submissions, subject comprehension as demonstrated by assignments, exams and attendance.

Grade distribution:

- Readings, discussions, participation in class and regular attendance: 25%
- Assignments / Homework: 10%
- Project 1: 15%
- Project 2: 20%
- Final Project: 30%

### Required Reading

The Industrial Design Reader

Author: Edited by Carma Gorman

Publisher: New York: Allworth Press, 2004

There will also be a variety of reading assignments throughout the semester consisting of excerpts from books, periodicals, journals, and on-line articles. Reading assignments will be posted on Moodle / Kepler3. You are expected to check Moodle / Kepler3 every week for posted reading material and assignments. Come prepared to engage in a round table discussion for the following class.

### Suggested Reading

A comprehensive Book List will be posted on Moodle / Kepler3 early in the semester.

**Weekly Course Schedule**

The weekly course schedule along with reading assignment and project assignments are available on Moodle. Schedule and assignments are subject to change so please be sure to check frequently for updates.

**Contact Information**

Email: [jose.m.alcala@njit.edu](mailto:jose.m.alcala@njit.edu)

Office Location: Weston 679

Office Hours: Mondays and Thursdays 11:30 – 1:00

Week	Day	Class Activities	Assignment
1	5 September	<b>Introduction:</b> <ul style="list-style-type: none"> <li>Education at NJIT</li> <li>Course Expectations</li> </ul> <b>Movie:</b> <ul style="list-style-type: none"> <li>Objectified</li> </ul>	<b>Reading:</b> <ul style="list-style-type: none"> <li><i>The Little Prince</i> (excerpt); de Saint-Exupery, Antoine</li> </ul>
2	12 September	<b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>Platonics</li> <li>Growth</li> <li>Illusion</li> </ul>	<b>Reading:</b> <ul style="list-style-type: none"> <li><i>Cosmicomics, The Spiral</i>; Calvino, Italo</li> <li><i>On Growth and Form, Chapter 1, Introductory</i>; Thompson, D'Arcy</li> </ul>
3	19 September	<b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>Morphology</li> <li>Form and Function</li> <li>Evolution</li> </ul> <b>Movie:</b> <ul style="list-style-type: none"> <li>Faces: Beauty</li> </ul>	<b>Reading:</b> <ul style="list-style-type: none"> <li><i>The Quark and the Jaguar, Chapter 16, Selection at Work in Biological Evolution and Elsewhere</i></li> <li><i>On Size and Life, Chapter 2, Proportions and Size</i>; McMahon, Thomas A. and Bonner, John Tyler</li> </ul>
4	26 September	<b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>Scale</li> <li>Biological Evolution: Carbon vs. Silicon</li> <li>Tools Making Tools: All Thumbs</li> </ul> <b>Movie:</b> <ul style="list-style-type: none"> <li>The Gods Must be Crazy</li> </ul>	<b>Assignment:</b> <ul style="list-style-type: none"> <li>Project 1: Beauty - Beautiful Vase, Ugly Vase</li> </ul>
5	3 October	<b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>Need vs. Want</li> <li>Maslow - Hierarchy of Needs</li> </ul>	<b>Reading:</b> <ul style="list-style-type: none"> <li><i>Design for the Real World, Chapter 1, What is Design?</i>; Papaneck, Victor</li> <li><i>The Evolution of Useful Things, Chapter 1, How the Fork Got its Tines</i>; Petroski, Henry</li> </ul>
6	10 October	<b>Lecture:</b> <ul style="list-style-type: none"> <li>The Human Need and Desire to Design</li> </ul> <b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>Aesthetics</li> <li>Desire</li> <li>Pornography - Visual Temptation</li> </ul>	<b>Project 1 Review:</b> <ul style="list-style-type: none"> <li>Beauty - Beautiful Vase, Ugly Vase</li> </ul> <b>Reading:</b> <ul style="list-style-type: none"> <li><i>The Design of Everyday Things, Chapter 1, The Psychopathology of Everyday Things</i>; Norman, Donald A.</li> <li><i>The Design of Everyday Things, Chapter 6, The Design Challenge</i>; Norman, Donald A.</li> </ul>

7	17 October	<b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>· Culture</li> <li>· Ritual</li> </ul> <b>Movie:</b> <ul style="list-style-type: none"> <li>· Just For Kicks</li> </ul>	<b>Assignment:</b> Project 2.1: Artifact Timeline  <b>Reading:</b> <ul style="list-style-type: none"> <li>· <i>Family Time: Studying Myth and Ritual in Working Families</i>; Shore, Bradd</li> </ul>
8	24 October	<b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>· Value</li> <li>· Culture</li> <li>· Belief</li> </ul> <b>Movie:</b> More Human than Human	<b>Reading:</b> <ul style="list-style-type: none"> <li>· <i>Toward an Anthropological Theory of Value, Chapter 1, Three Ways of Talking about Value</i>; Graeber, David</li> <li>· <i>The Social Life of Things, Chapter 2 The Cultural Biography of Things</i>; Kopytoff, Igor</li> </ul>
9	31 October	<b>Lecture:</b> Lateral Thinking  <b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>· Problem Solving, Novelty and Frivolity</li> </ul>	<b>Reading:</b> <ul style="list-style-type: none"> <li>· <i>Lateral Thinking, Schumacher UK Bristol Lectures October 1979</i>; de Bono, Edward</li> </ul>
10	7 November	<b>Lecture:</b> Early to Mid-century Design Movements  <b>Movie:</b> <ul style="list-style-type: none"> <li>· Charles and Ray Eames</li> </ul>	<b>Assignment:</b> Project 2.2: Innovation - A Revisionist History  <b>Project 2.1 Review:</b> Artifact Timeline
11	14 November	<b>Roundtable Discussion:</b> Current Design Movements <ul style="list-style-type: none"> <li>· Design: Haptic feedback, Virtual reality, Parametric modeling</li> <li>· Fabrication: CNC, RP, 3D Printing</li> </ul> <b>Movie:</b> <ul style="list-style-type: none"> <li>· Welcome to Machintosh</li> <li>· IDEO: Shopping Cart</li> </ul>	<b>Reading:</b> <ul style="list-style-type: none"> <li>· <i>Glimmer, Section 1. Universal</i>; Berger, Warren</li> </ul>
12	21 November	No Class: Friday Schedule	
13	28 November	<b>Assignment:</b> Final Project: Jumps in Future History  <b>Project 2.2 Review:</b> Innovation - A Revisionist History	

14	5 December	<b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>· Wasn't the future great?</li> <li>· Syd Mead</li> </ul> <b>Movie:</b> Blade Runner	<b>Reading:</b> <ul style="list-style-type: none"> <li>· <i>The Age of Spiritual Machines</i>, various excerpts; Kurzweil, Ray</li> </ul>
15	12 December	<b>Roundtable Discussion:</b> <ul style="list-style-type: none"> <li>· Future technology</li> <li>· Future materials</li> <li>· Future Needs</li> </ul> <b>Movie:</b> <ul style="list-style-type: none"> <li>· Nanotechnology</li> <li>· Future</li> </ul>	<b>Reading:</b> <ul style="list-style-type: none"> <li>· <i>Being Digital, Part Three: Digital Life</i>; Negroponte, Nicholas</li> </ul>
16	19 December	<b>Project 2.2 Review:</b> Jumps in Future History	